

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-19 are currently being amended.

Claims 20-25 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-25 are now pending in this application.

Rejection under 35 U.S.C. § 103(a)

Claims 1-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maruko et al. (U.S. Patent 6,604,042) in view of Levine (U.S. Patent Publication 2003/00141176). This rejection is respectfully traversed.

Claim 1 requires an information providing apparatus for a vehicle that includes a “contact possibility information unit configured to determine a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the front object, the contact possibility information unit providing contact possibility information by changing at least one of the driving force and the braking force of the vehicle according to the contact possibility”, “a driver intention detector configured to detect a driving intention of a driver of the vehicle, the driver intention detector detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing”, and a “controller configured to modify at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detector.”

Claim 18 requires an information providing apparatus for a vehicle that includes a “contact possibility information means for determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the front object, the contact possibility information means providing contact possibility information by changing at least one of the driving force and braking force of the vehicle according to the contact possibility”, a “driver intention detecting means for detecting a driving intention of a driver of the vehicle, the driver intention detecting means detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing”, and a “controlling means for modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detecting means.”

Claim 20 requires an information providing method for a vehicle that includes the steps of “determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the front object”, “detecting a driving intention of a driver of the vehicle, to detect at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing”, “calculating, according to the contact possibility, a control value to change at least one of the driving force and braking force of the vehicle”, and “modifying a threshold for providing a control value according to a result of the detecting a driving intention.”

Maruko et al. teaches a control system in which the control system checks whether a lane-changing indicative flag LC shows the presence of a driver’s intention for lane-changing. (See U.S. Patent 6,604,042; column 9, lines 58-64). Applicants note that Maruko et al. was issued with an incorrect set of drawings. The correct set of drawings for Maruko et al. is attached as Exhibit A. If the lane-changing indicative flag LC shows a presence of a driver’s intention for lane-changing (LC=1), the control routine skips the steps for preliminary-braking-control-mode, including the step for setting brake-fluid pressure in step S11. (See U.S. Patent 6,604,042; column 9, lines 65-67; column 10, lines 1-15). If the lane-changing indicative flag LC does not show a presence of a driver’s intention for lane-changing (LC=0), the control routine proceeds through the steps for preliminary-braking-control-mode,

including the step of setting brake-fluid pressure in step S11. (See U.S. Patent 6,604,042; column 9, line 67; column 10, lines 1-15).

Maruko et al. teaches that brake-fluid pressure is controlled if a driver's intention to change lanes is not present and that brake-fluid pressure is not controlled if a driver's intention to change lanes is present. Because Maruko et al. teaches that brake-fluid pressure is either controlled or not controlled on the basis of a driver's lane-changing intention, Maruko et al. does not teach modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detector, as required by claims 1 and 18. Nor does Maruko et al. teach "modifying a threshold for providing a control value according to a result of the detecting a driving intention", as required by claim 19.

Levine teaches a vehicle override system in which a throttle generated signal is divided into two components, with the first component "directed to the fuel control valve 111 to maintain the vehicle speed at its preexisting speed." (See U.S. 2003/0014176; paragraph 0049). The second component "is directed to the fuel control valve 111 after first passing through an adjustable time delay circuit 117 and an amplitude divider circuit 118." (See U.S. 2003/0014176; paragraph 0049). Levine teaches that this time delay circuit may be used in response to a sensed condition that requires override of a vehicle's manual controls. (See U.S. 2003/0014176; paragraphs 0049, 0052-0055). However, Levine does not teach that a threshold for providing contact possibility information is modified in response to a sensed condition.

Levine teaches that the output of the control circuit is modified on the basis of a sensed condition, not modification of a threshold to start the time delay circuit on the basis of a sensed condition. Levine does not teach modifying at least one threshold for providing contact possibility information according to a detection result provided by the driver intention detector, as required by claims 1 and 18. Nor does Levine teach "modifying a threshold for providing a control value according to a result of the detecting a driving intention", as required by claim 19.

Maruko et al. and Levine do not teach all of the limitations required by amended claims 1, 18, and 19. Withdrawal of this rejection is respectfully requested.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

7/8/05

By



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